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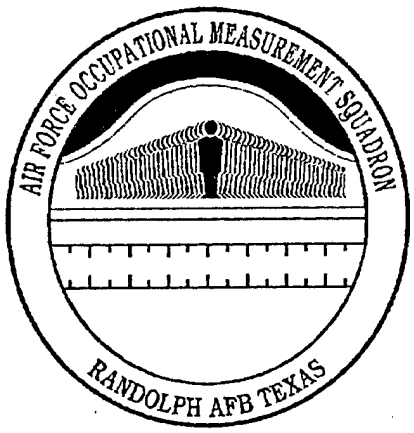

OCCUPATIONAL SURVEY REPORT

COMMUNICATIONS ANTENNA SYSTEMS

AFSC 2E6X1

AFPT 90-2E6-038

MAY 1996

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
1550 5th STREET EAST
RANDOLPH AFB, TEXAS 78150-4449

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PREFACE

This report presents the results of an Air Force Occupational Survey of Communications Antenna Systems (AFSC 2E6X1) career ladder. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

The survey instrument was developed by 1Lt Brandon Doan, Inventory Development Specialist. Ms. Olga Velez provided computer programming support, and Mr. Richard G. Ramos provided administrative support. 2Lt Karla K. Rudert, Occupational Analyst, analyzed the data and wrote the final report.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to the AF Occupational Measurement Squadron, Attention: Chief, Occupational Analysis Flight (OMY), 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449 (DSN 487-6623).

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SUMMARY OF RESULTS

1. *Survey Coverage*: The Communications Antenna Systems (AFSC 2E6X1) career ladder incumbents were surveyed to obtain current task and equipment data for use in examining training programs. Survey results are based on responses from 255 members worldwide. All commands were proportionately represented.

2. *Career Ladder Structure*: Structure analysis identified two clusters and three independent jobs (IJ): General Construction Independent Job, Engineering/Electronics Installation (EI) Cluster, Antenna Maintenance Cluster, Quality Assurance Independent Job, and Supervision Independent Job.

3. *Career Ladder Progression*: Progression in this career ladder follows a pattern of technical job focus through the 3- and 5-skill levels, with a broadening into supervision occurring at the 7-skill level. Emphasis is seen in performing more general construction activities at the 3-skill level with a progression into engineering/electronics installation and maintenance at the 5-skill level. The 7-skill level personnel spend most of their time in supervisory tasks, but they may still perform some maintenance or installation.

4. *Training Analysis*: A review of the Course Training Standard (CTS) showed 28 percent of the CTS items were unsupported by survey data. Training personnel and subject-matter experts (SMEs) should review these unsupported CTS items to determine if inclusion in future revisions is warranted.

5. *Job Satisfaction Analysis*: Overall, AFSC 2E6X1 members appear to be more satisfied with their jobs than members of a comparative sample of logistics career ladder personnel. Furthermore, members of the current sample appear as satisfied with their jobs as previous AFSC 2E6X1 (formerly AFSC 361X0) personnel surveyed in 1989. Job satisfaction data of specific career ladder jobs show most job members find their work to be interesting and feel their talents and training are being properly used.

6. *Implications*: Although the career field is shrinking, results indicate little change in the jobs since the last survey in 1990. The present classification structure, as described in *AFMAN 36-2108 Specialty Descriptions*, accurately portrays the jobs in this study. Analysis of career ladder documents indicates the CTS is primarily supported by survey data; however, training personnel and SMEs should review unsupported and unreferenced CTS items.

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OCCUPATIONAL SURVEY REPORT (OSR)
COMMUNICATIONS ANTENNA SYSTEMS CAREER LADDER
(AFSC 2E6X1)

INTRODUCTION

This is a report of an occupational survey of the Communications Antenna Systems career ladder completed by the Occupational Analysis Division, Air Force Occupational Measurement Squadron. This survey was performed as part of the 5-year analysis cycle to ensure currency of the occupational survey database. The last survey results pertaining to this career ladder were published in May 1990.

Background

As described in the AFMAN 36-2108 *Specialty Description*, dated 31 October 1994, personnel in this career ladder supervise and plan installation and maintenance actions on antenna systems for command, control, communications, and computers. Members also monitor and analyze performance of these antenna systems. Communications Antenna Systems was formerly named Communication-Cable and Antenna Systems. A related DOD occupational group is 2E6X2, Communications Cable Systems.

All entry level personnel must complete Course J3ABR2E631, Communication Antenna Systems Apprentice, at Sheppard AFB TX. This is a 6-week course consisting of outside plant construction fundamentals and antenna principles; installation and maintenance of antenna systems; pole climbing; and pole line construction. To qualify for this course, personnel must successfully complete course L3AQR2E631 950, Electronic Principles, at Lackland AFB TX. Entry into this career ladder currently requires an Armed Services Vocational Battery Mechanical score of 51.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI), AFPT 90-2E6-038, dated October 1994. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 27 subject-matter experts (SMEs) at the following locations:

BASE	REASON FOR VISIT
Sheppard AFB TX	Technical Training School
Kelly AFB TX	1827 Engineering Installation (EI) Squadron (Mobile installation and maintenance)
Patrick AFB FL	45 Maintenance Squadron (support antennas in the Eastern Test Range)
Andrews AFB MD	89 Communications Group (Antenna Maintenance)
Keesler AFB MS	1839 Engineering Installation Group (support southeast CONUS and Europe)

The resulting JI contained a comprehensive listing of 629 tasks grouped under 18 duty titles and a background section requesting such information as grade, duty title, type of antennas installed or maintained, type of towers installed or maintained, tools or equipment used or operated, and test equipment used or operated.

Survey Administration

Base training offices at operational bases worldwide administered the inventory to all eligible AFSC 2E6X1 personnel. Members eligible for the survey consisted of the total assigned 3-, 5-, and 7-skill level populations, excluding the following: (1) hospitalized personnel; (2) personnel in transition for a permanent change of station; (3) personnel retiring within the time the inventories were administered to the field; and (4) personnel in their jobs less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB.

Each individual completing the inventory filled in an identification and biographical information section and checked each task he or she currently performed on the job. After checking tasks performed, each individual rated the tasks checked on a 9-point scale showing relative time spent on that task compared to other tasks performed. The ratings ranged from 1 (very small amount of time spent) to 9 (very large amount of time spent).

To determine relative time spent for each task, all incumbent's ratings are assumed to account for 100 percent of job time. Each individual task rating is divided by the total of all task ratings and then multiplied by 100 to provide a relative percentage of time spent on each task.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across major commands (MAJCOM) and military paygrade groups. All eligible DAFSC 2E6X1 personnel were mailed survey booklets. The 255 respondents in the final sample represent 59 percent of the total assigned personnel and 68 percent of the total personnel surveyed. Table 1 reflects the MAJCOM distribution of assigned AFSC 2E6X1 personnel as of January 1995. Table 2 displays the paygrade distribution of the sample. As reflected in these tables, the survey sample is a satisfactory representation of the career ladder population.

Task Factor Administration

In addition to completing the JI, selected senior 2E6X1 personnel also completed a second booklet rendering judgments on task training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the JIs. The information gained from these task factor data is used in various analyses and is a valuable part of the training decision process.

Task Difficulty (TD). TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 26 senior NCOs who completed TD booklets were asked to rate the difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized, so tasks have an average difficulty of 5.00 with a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

Training Emphasis (TE). TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 33 senior AFSC 2E6X1 NCOs who completed a TE booklet were asked to select tasks they felt require some sort of structured training for entry-level personnel. Then they indicated how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident technical schools, field training detachments, mobile training teams, formal

TABLE 1

COMMAND DISTRIBUTION OF 2E6X1 PERSONNEL

COMMAND	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
AFMC	48	44
PACAF	12	14
USAFE	12	9
ACC	8	10
AIA	6	7
AFSPC	5	7
EUR	5	2
AMC	4	6
AETC	*	*
AFNEWS	*	*

TOTAL ASSIGNED = 431
TOTAL SURVEYED = 377
TOTAL IN SURVEY SAMPLE = 255
PERCENT OF ASSIGNED IN SAMPLE = 59%
PERCENT OF SURVEYED IN SAMPLE = 68%

* Less than 1 percent

NOTE: The assigned strength is based on January 1995 figures
The total surveyed excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2

PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

GRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-2	6	8
E-3	10	9
E-4	31	32
E-5	30	26
E-6	13	15
E-7	9	9
E-8	1	1

* Assigned strength as of January 1995

on-the-job training (OJT), or any other organized training method. There was acceptable agreement among the 33 raters. The average TE rating was 2.68, and the standard deviation was 1.63. Any task with a TE rating of 4.31 or above is considered to have high TE.

When used in conjunction with the primary criterion of percent members performing, TD and TE ratings can provide insight into first-enlistment personnel training requirements. These insights may suggest a need for lengthening or shortening portions of instruction for entry-level jobs.

SPECIALTY JOBS
(Career Ladder Structure)

A USAF Occupational Analysis begins with an examination of the career ladder structure. The structure of jobs within the Communications Antenna Systems career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of other specialty background factors.

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Programs (CODAP) creates an individual job description for each respondent. The CODAP hierarchical clustering program then compares all individual job descriptions, locates those descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group, or forms new groups based on similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the *Job*. When two or more jobs have a substantial degree of similarity in tasks performed and time spent performing tasks, they are grouped together and identified as a *Cluster*. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Structure analysis identified two clusters and three independent jobs (IJ) in the survey sample. Based on task similarity and relative time spent, the division of jobs performed by 2E6X1 personnel is illustrated in Figure 1.

A listing of the clusters and IJs is provided below. The stage (ST) number or group number (GP) shown beside each title is a reference to computer printed information; the number of personnel (N) in each stage or group is also shown.

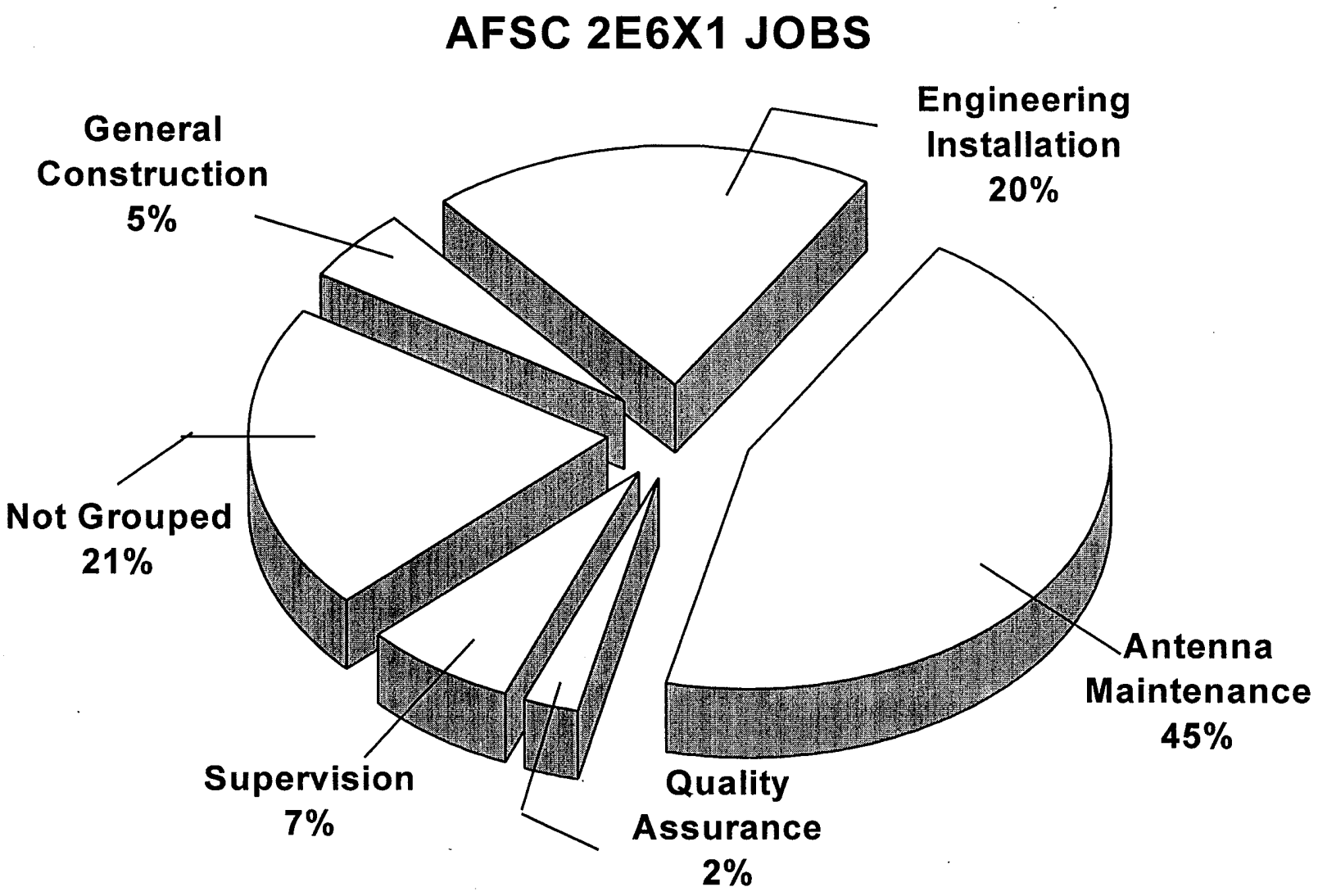
AFSC 2E6X1 JOBS
General Construction 5%
Engineering Installation 20%
Not Grouped 21%
Antenna Maintenance 45%
Supervision 7%
Quality Assurance 2%

Figure 1

I. GENERAL CONSTRUCTION JOB (ST042, N=13)

II. ENGINEERING/ELECTRONICS INSTALLATION (EI) CLUSTER (ST046, N=51)

III. ANTENNA MAINTENANCE CLUSTER (GP034, N=114)

IV. QUALITY ASSURANCE JOB (ST041, N=6)

V. SUPERVISION JOB (ST040, N=18)

The respondents forming these groups account for 79 percent of the survey sample. The remaining 21 percent were performing tasks which did not group with any of the defined jobs. Job titles given by respondents representative of "Other" personnel included Workload Controller, Antenna Maintenance, and Antenna Team Member.

Group Descriptions

The following paragraphs contain brief descriptions of the two clusters and three IJs identified in the career ladder structure analysis. Table 3 presents the relative time spent by respondents in each job across each duty area listed in the JI. Table 4 displays selected background information, such as DAFSC distributions across each group, average months in service (i.e., Total Active Federal Military Service (TAFMS)), and average number of tasks performed. Also included in the back of this OSR is Appendix A, a list of representative tasks performed by members of each group.

I. GENERAL CONSTRUCTION JOB (ST042). The 13 members of this cluster represent 5 percent of the total survey sample. Over half of the work performed in this job involves general construction (Duty F), and no other job groups spend as much time performing general construction activities. Representative tasks for members of this job include:

dig trenches by hand
climb towers
climb unstepped poles
backfill trenches manually
perform or standard construction hand signals
tie knots in fiber ropes
load or unload dry storage materials
climb stepped poles
install lightning protection devices on poles or towers
install lightning protection devices on antenna transmission systems

TABLE 3

RELATIVE PERCENT TIME SPENT ON DUTIES BY AFSC JOB GROUPS

DUTIES	GENERAL CONSTRUCTION JOB (ST042)	ENGINEERING/ ELECTRONICS INSTALLATION (EI) CLUSTER (ST046)	ANTENNA MAINT CLUSTER (GP034)	QUALITY ASSURANCE JOB (ST041)	SUPERVISION JOB (ST040)
A ORGANIZING AND PLANNING	3	3	5	16	27
B DIRECTING AND IMPLEMENTING	1	2	4	7	16
C INSPECTING AND EVALUATING	1	2	5	24	20
D TRAINING	-	2	4	9	14
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	3	3	7	15	16
F PERFORMING GENERAL CONSTRUCTION ACTIVITIES	54	21	15	4	1
G INSTALLING AND MAINTAINING ANTENNA SUPPORT STRUCTURES	16	22	9	4	*
H INSTALLING AND MAINTAINING CABLES	11	16	14	3	*
I PERFORMING GENERAL ANTENNA INSTALLATION AND MAINTENANCE ACTIVITIES	7	11	16	1	1
J INSTALLING AND MAINTAINING WIRE ANTENNAS	*	2	2	1	*
K INSTALLING AND MAINTAINING PARABOLIC ANTENNAS	1	1	1	-	-
L INSTALLING AND MAINTAINING RADOMES	*	2	*	-	-
M INSTALLING AND MAINTAINING WAVEGUIDES	1	3	2	-	*
N INSTALLING AND MAINTAINING ROTATABLE LOG PERIODIC (RLP) ANTENNAS	-	3	9	3	*
O PERFORMING CORE AUTOMATED MAINTENANCE SYSTEMS (CAMS) ACTIVITIES	-	-	4	*	-
P PERFORMING QUALITY ASSURANCE OR CONTROL ACTIVITIES	*	*	*	9	1
Q PERFORMING TEAM CHIEF ACTIVITIES	*	6	2	*	1
R PERFORMING MOBILITY AND SUPPORT ACTIVITIES	1	1	*	-	*

- Denotes duty not performed
* Denotes less than .5 percent
** Columns may not add exactly to 100 percent due to rounding

TABLE 4

SELECTED BACKGROUND DATA FOR AFSC 2E6X1 CAREER LADDER JOBS

	GENERAL CONSTRUCTION ST042	ENGINEERING/ ELECTRONICS INSTALLATION (EI) CLUSTER ST046	ANTENNA MAINTENANCE CLUSTER GP034	QUALITY ASSURANCE ST041	SUPERVISION ST040
NUMBER IN GROUP	13	51	114	6	18
PERCENT OF SAMPLE	5%	20%	45%	2%	7%
PERCENT IN CONUS	92%	100%	44%	100%	72%
DAFSC DISTRIBUTION					
2E631	85%	27%	25%	0%	0%
2E651	15%	67%	59%	17%	6%
2E671	0%	6%	16%	83%	94%
PREDOMINANT PAYGRADE(S)	E-2	E-4, E-5	E-4, E-5	E-5, E-6, E-7	E-6, E-7
AVERAGE MONTHS IN CAREER FIELD	17	85	92	192	188
AVERAGE MONTHS IN SERVICE (TAFMS)	21	94	104	193	205
PERCENT IN FIRST ENLISTMENT	92%	28%	30%	0%	0%
AVERAGE NUMBER OF TASKS PERFORMED	41	183	159	71	85
PERCENT SUPERVISING	0%	35%	54%	17%	94%

The majority of personnel in this job, as seen in Table 4, hold the 3-skill level and have an average time in service of 21 months. This job is an entry level position since 92 percent of the personnel are in their first enlistment, and no supervisory work is performed.

II. ENGINEERING/ELECTRONICS INSTALLATION (EI) CLUSTER (ST046). The 51 members of this cluster represent 20 percent of the total survey sample. The work performed by members in this job include general construction, installation, and maintenance of antenna support structures, cables, and antennas. EI members spend more time performing team chief activities than any other job group. Representative tasks for members of this cluster of jobs include:

install UHF antennas
install VHF antennas
install HF antennas
install pole steps
dig pole holes using power equipment
install tower grounding systems
perform operator maintenance on vehicles
inspect pintle hooks

The majority of personnel in this job, as seen in Table 4, hold the 5-skill level and have an average time in service of 7.8 years. In this job, an average of 183 tasks are performed.

Survey data show two distinct jobs in this cluster--team chiefs and team members. In this sample, 11 members are performing more supervisory tasks as team chiefs. Team chiefs are more likely to perform tasks such as writing EPRs, scheduling training, and certifying team members' ability to climb and work aloft. Team chiefs are predominantly E-5s or E-6s.

The other job, performed by 40 personnel, consists of team members involved in installation and maintenance of antenna support structures. Team members are more likely to remove or replace obstruction lighting systems, erect guyed antenna support towers, and adjust photoelectric cells. Team members are mainly E-4s or E-5s.

III. ANTENNA MAINTENANCE CLUSTER (GP034). The 114 members of this cluster represent 45 percent of the total survey sample. This cluster of jobs, performed by more AFSC 2E6X1 members than any other job, includes performing general antenna installation and maintenance activities, performing general construction activities, and installing and maintaining

cables. Members of this cluster also perform Duties N and O, installing and maintaining rotatable log periodic (RLP) antennas and performing Core Automated Maintenance System activities, more than any other job group. Representative tasks for members of this cluster of jobs include:

perform corrosion control on antenna systems
inspect guys
maintain UHF antennas
inspect antenna or line support structures or hardware
maintain VHF antennas
inspect anchor rods
maintain HF antennas
perform tests on antennas using multimeters
perform ground maintenance around antenna systems
inspect RLP antenna systems

The majority of personnel in this cluster, as seen in Table 4, hold the 5-skill level and have an average time in service of 8.7 years. In this cluster of jobs, an average of 159 tasks are performed.

Survey data show two distinct jobs within this cluster--Maintenance Team Members and NCOICs. In this sample, 27 members are performing more supervisory tasks as NCOICs. Predominantly E-5s or E-6s, NCOICs are more likely to perform tasks such as writing EPRs, establishing work schedules, and assigning projects and repair work.

The other job, performed by 70 personnel, consists of team members involved in maintenance of antenna systems. Maintenance team members are more likely to remove or replace baluns, adjust tension on wire antenna transmission lines, and raise or lower RLP antennas using hand winches. Team members are mainly E-3s, E-4s or E-5s.

IV. QUALITY ASSURANCE JOB (ST041). The 6 members of this job represent 2 percent of the total survey sample. The work performed by members in this job include evaluation, inspection, organization and planning, general administration, and training. Members in this job spend more time inspecting, evaluating and performing quality assurance or control activities than any other job group. Representative tasks for members of this cluster of jobs include:

evaluate effectiveness of training programs
conduct staff assistance visits (SAVs)
evaluate safety or security programs
develop quality assurance programs

evaluate training methods and techniques
identify and report equipment or supply problems
develop self-inspection program checklists
write staff studies, surveys, or special reports, other than training reports
evaluate causes of mission operational discrepancies
evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) Program standards
analyze workload requirements

With an average of 16.0 years in the field, this is the most experienced job group identified in this career field. Members in this job group hold the 7-skill level and have an average time in service of 16.1 years. Only 1 of the 6 members acted in a supervisory role.

V. SUPERVISION (ST040). The 18 members of this job represent 7 percent of the total survey sample. The work performed by members in this job include organizing, planning, evaluating, inspecting, directing, and implementing. Ninety-three percent of their time is spent performing managerial and supervisory duties. Representative tasks for members of this cluster of jobs include:

schedule personnel for temporary duty (TDY) assignments, leaves, or passes
plan or schedule work assignments or priorities
determine or establish work priorities
counsel personnel on personal or military-related matters
establish performance standards for subordinates
write EPRs
participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other than conducting
inspect personnel for compliance with military standards
establish work schedules
write recommendations for awards or decorations

This job group has the most experience in the military. As seen in Table 4, members hold the 7-skill level and have an average time in service of 17.1 years. Fifty-six percent of the personnel are assigned to AFMC.

Comparison of Current Jobs to Previous Survey Findings

The results of the specialty job analysis were compared to those of the last AFSC 2E6X1 OSR published in 1990. As shown in Table 5, most jobs in the current survey were also identified in 1990. The few differences noted between comparable groups during the review can be attributed to the reduction of personnel in the career field. In May 1989, the total assigned personnel was 807. The total assigned personnel in January 1995 was 432, nearly a 50 percent reduction from the previous survey.

Based on this review, the current sample respondents were found to be performing the same types of jobs identified in 1990, but are performing more tasks because of the shrinking career field.

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis examines differences in tasks performed between skill level members. This information may then be used to evaluate how well career ladder documents, such as *AFMAN 36-2108 Specialty Descriptions*, reflect what career ladder personnel are doing in the field.

The distribution of AFSC 2E6X1 skill-level groups across career ladder jobs is displayed in Table 6. Notice that the majority of members in the General Construction Job are at the 3-skill level. As members progress to the 7-skill level positions they tend to hold jobs in quality assurance or supervision. Table 7 offers another perspective by displaying relative percent time spent on each duty across skill-level groups. Once again, typical career ladder progression is evident as members spend increasingly more duty time performing supervisory functions as they progress in skill level.

Skill-Level Descriptions

DAFSC 2E631. Representing 25 percent of the survey sample, the 64 3-skill level personnel perform an average of 110 tasks. They comprise 85 percent of the General Construction Job, and 27 percent of their time is spent performing general construction activities (See Table 7). Three-skill level members also spend more time performing technical aspects of the job, including installing and maintaining antenna support structures, installing and maintaining cables, and performing general antenna installation and maintenance activities. Table 8 lists representative tasks they perform and reflects the basic technical nature of their work.

TABLE 5

JOB SPECIALTY COMPARISONS BETWEEN CURRENT AND 1990 SURVEYS

CURRENT SURVEY (N=255)	1990 SURVEY (N=460)
ENGINEERING/ELECTRONICS INSTALLATION (EI) CLUSTER	ENGINEERING/ELECTRONICS INSTALLATION (EI) CLUSTER
ANTENNA MAINTENANCE CLUSTER	ANTENNA MAINTENANCE CLUSTER
SUPERVISION JOB	SUPERVISION CLUSTER
QUALITY ASSURANCE JOB	QUALITY ASSURANCE
GENERAL CONSTRUCTION JOB	NOT IDENTIFIED
NOT MATCHED	PARABOLIC ANTENNA INSTALLATION
NOT MATCHED	TRAINING

TABLE 6

DISTRIBUTION OF SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS
(PERCENT MEMBERS RESPONDING)

JOB	DAFSC 2E631 (N=64)	DAFSC 2E651 (N=135)	DAFSC 2E671 (N=56)
I. GENERAL CONSTRUCTION	17	1	0
II. ENGINEERING INSTALLATION CLUSTER	22	25	6
III. ANTENNA MAINTENANCE CLUSTER	45	50	32
IV. QUALITY ASSURANCE	0	1	9
V. SUPERVISION	0	1	30
NOT GROUPED	16	22	23

* Less than .5 percent

TABLE 7

AVERAGE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

	DUTIES	DAFSC 2E631 (N=64)	DAFSC 2E651 (N=135)	DAFSC 2E671 (N=56)
A	ORGANIZING AND PLANNING	2	6	20
B	DIRECTING AND IMPLEMENTING	1	4	11
C	INSPECTING AND EVALUATING	2	5	15
D	TRAINING	1	5	10
E	PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	5	7	14
F	PERFORMING GENERAL CONSTRUCTION ACTIVITIES	27	17	5
G	INSTALLING AND MAINTAINING ANTENNA SUPPORT STRUCTURES	14	11	3
H	INSTALLING AND MAINTAINING CABLES	15	13	5
I	PERFORMING GENERAL ANTENNA INSTALLATION AND MAINTENANCE ACTIVITIES	15	12	5
J	INSTALLING AND MAINTAINING WIRE ANTENNAS	2	2	*
K	INSTALLING AND MAINTAINING PARABOLIC ANTENNAS	1	1	*
L	INSTALLING AND MAINTAINING RADOMES	1	1	*
M	INSTALLING AND MAINTAINING WAVEGUIDES	3	3	1
N	INSTALLING AND MAINTAINING ROTATABLE LOG PERIODIC (RLP) ANTENNAS	8	5	2
O	PERFORMING CORE AUTOMATED MAINTENANCE SYSTEMS (CAMS) ACTIVITIES	3	3	2
P	PERFORMING QUALITY ASSURANCE OR CONTROL ACTIVITIES	*	*	2
Q	PERFORMING TEAM CHIEF ACTIVITIES	*	5	5
R	PERFORMING MOBILITY AND SUPPORT ACTIVITIES	1	1	1

* Denotes less than .5 percent

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY 2E631 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=64)
F180	Climb towers	95
F206	Perform or standard construction hand signals	91
F181	Climb unstepped poles	88
F179	Climb stepped poles	86
F216	Tie knots in fiber ropes	86
F215	Tie hitches in fiber ropes	81
F205	Perform operator maintenance on vehicles	75
F176	Backfill trenches manually	75
G235	Inspect anchor rods	73
G240	Inspect guys	73
F204	Perform ground maintenance around antenna systems	72
F185	Dig trenches by hand	72
I380	Perform corrosion control on antenna systems	69
G236	Inspect antenna or line support structures or hardware	68
F195	Install lightning protection devices on antenna transmission systems	67
F196	Install lightning protection devices on poles or towers	67
N462	Inspect RLP antenna systems	66
F192	Inspect special purpose vehicles or auxiliary equipment	66
H303	Install cable tags	66
G249	Install pole steps	66
H354	Test or troubleshoot cables using multimeters	66
N461	Inspect Rotatable Log Periodic (RLP) antenna control wiring	64
I377	Maintain UHF antennas	63
F202	Maintain obstruction lighting systems	63
I394	Remove or replace UHF antennas	61
G258	Measure strand tension using traction dynamometers	61
I360	Identify or tag antennas	61
F203	Measure voltage standing wave ratios	61
F198	Interpret schematic diagrams	61

* Average Number of Tasks Performed - 110

DAFSC 2E651. Representing 53 percent of the survey sample, the 135 5-skill level personnel perform an average of 140 tasks. Fifty percent of the 5-skill level personnel perform jobs within the Antenna Maintenance Cluster, and 25 percent perform jobs within the EI Cluster (See Table 6). Representative tasks performed by 5-skill level members are listed in Table 9. The factor distinguishing the 5-skill level from the 3-skill level members is the performance of some basic supervisory functions (see Table 10). Five-skill level members spend less time in general construction than 3-skill level members and more time performing supervisory and managerial duties.

DAFSC 2E671. Representing 22 percent of the survey sample, the 56 7-skill level personnel perform an average of 115 tasks. Unlike their junior counterparts at the 3- and 5-skill levels, higher percentages of these personnel are working in the Quality Assurance and Supervision Jobs. However, 32 percent of 7-skill level personnel are still performing jobs in the Antenna Maintenance Cluster (See Table 6). Table 7 shows 7-skill level personnel spend 70 percent of their time performing tasks in duties A-E which are supervisory and managerial in nature. Additionally, Table 11 shows the tasks most members perform involve supervision or management. Table 12 differentiates the tasks performed by 5- and 7-skill level members, showing a higher percentage of 7-skill level members perform less technical tasks and more supervisory tasks.

Summary

Progression in this career ladder follows a pattern of technical job focus through the 3- and 5-skill levels, with a broadening into supervision occurring at the 7-skill level. Emphasis is seen in performing more general construction activities at the 3-skill level with a progression into engineering/electronics installation and maintenance at the 5-skill level. The 7-skill level personnel spend most of their time in supervisory tasks, but they may still perform some maintenance or installation.

ANALYSIS OF AFMAN 36-2108 SPECIALTY DESCRIPTIONS

Survey data were compared to *AFMAN 36-2108 Specialty Descriptions* for AFSC 2E6X1, Communications Antenna Systems, dated 31 October 1994. The descriptions for the 3-, 5-, and 7-skill level members were accurate, depicting technical aspects of the job, as well as the increase in supervisory responsibilities previously described in the DAFSC analysis. These specialty descriptions also capture the primary responsibilities of job members identified in the job structure analysis.

TABLE 9

REPRESENTATIVE TASKS PERFORMED BY 2E651 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=135)
F180	Climb towers	90
F216	Tie knots in fiber ropes	84
F205	Perform operator maintenance on vehicles	82
F179	Climb stepped poles	82
F215	Tie hitches in fiber ropes	81
F206	Perform or standard construction hand signals	79
F181	Climb unstepped poles	76
H354	Test or troubleshoot cables using multimeters	73
G236	Inspect antenna or line support structures or hardware	73
G240	Inspect guys	73
F176	Backfill trenches manually	70
I382	Perform tests on antennas using multimeters	70
I380	Perform corrosion control on antenna systems	70
F192	Inspect special purpose vehicles or auxiliary equipment	70
F185	Dig trenches by hand	69
H303	Install cable tags	68
H353	Test or troubleshoot cables using meggers	67
I360	Identify or tag antennas	67
G235	Inspect anchor rods	67
I371	Install VHF antennas	65
I370	Install UHF antennas	65
I394	Remove or replace UHF antennas	64
I386	Plumb antenna systems using transit method	64
I395	Remove or replace VHF antennas	64
H292	Inspect cable tags	64
F191	Inspect pintle hooks	64
F196	Install lightning protection devices on poles or towers	62
G237	Inspect cement bases	61
E137	Inventory equipment, tools, or supplies	61
H324	Perform insulation resistance tests on coaxial cables	60

* Average Number of Tasks Performed - 140

TABLE 10

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSCs 2E631 AND 2E651 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 2E631 (N=64)	DAFSC 2E651 (N=135)	DIFF
B35	Counsel personnel on personal or military-related matters	2	50	-48
C87	Write EPRs	0	44	-44
D97	Counsel trainees on training progress	3	46	-43
C59	Conduct performance feedback worksheet (PFW) evaluation sessions	3	45	-42
B53	Supervise Communication-Cable and Antenna Systems Apprentices (AFSC 2E631)	2	43	-41
D93	Conduct OJT	14	55	-41
D110	Maintain training records, charts, graphs, or files	9	50	-41
A17	Establish performance standards for subordinates	3	43	-40
B54	Supervise Communication-Cable and Antenna Systems Journeymen (AFSC 2E651)	0	39	-39
D111	Plan or schedule training, such as OJT, proficiency training, or ancillary training	0	39	-39
D107	Evaluate personnel for training needs	2	41	-39
D108	Evaluate progress of trainees	3	41	-38
A18	Establish work methods or procedures	8	45	-37
A24	Plan or schedule work assignments or priorities	2	36	-34
C83	Inspect personnel for compliance with military standards	3	36	-33
Q527	Brief team members on job requirements	0	32	-32
A8	Determine or establish work priorities	9	39	-30
C88	Write recommendations for awards or decorations	0	29	-29
C73	Evaluate personnel for compliance with performance standards or technical orders	2	30	-28
A19	Establish work schedules	6	34	-28
A2	Assign projects, maintenance, and repair work	8	35	-27

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY 2E671 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=56)
A21	Participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other tan conducting	86
B35	Counsel personnel on personal or military-related matters	79
A8	Determine or establish work priorities	73
C87	Write EPRs	71
C83	Inspect personnel for compliance with military standards	68
C88	Write recommendations for awards or decorations	66
A6	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	66
E122	Coordinate obtaining TDY orders, passports, or visas with appropriate agencies	66
A19	Establish work schedules	64
A2	Assign projects, maintenance, and repair work	64
E128	Draft requests for TDY orders, passports, or visas	63
B54	Supervise Communication-Cable and Antenna Systems Journeymen (AFSC 2E651)	63
A24	Plan or schedule work assignments or priorities	63
C59	Conduct performance feedback worksheet (PFW) evaluation sessions	63
B46	Initiate actions required due to substandard performance of personnel	61
A5	Coordinate communications requirements with appropriate agencies	61
A30	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	61
A17	Establish performance standards for subordinates	61
A1	Assign personnel to duty positions	59
C60	Conduct safety inspections of facilities or equipment	59
E119	Compile information for records, reports, or logs	57
A3	Assign sponsors for newly assigned personnel	57
A18	Establish work methods or procedures	57
E123	Coordinate supply matters with appropriate agencies	55
C61	Conduct self-inspections	55
D110	Maintain training records, chars, graphs, or files	55
B34	Conduct supervisory orientations of newly assigned personnel	55

* Average Number of Tasks Performed - 115

TABLE 12

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSCs 2E651 AND 2E671 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		DAFSC 2E651 (N=135)	DAFSC 2E671 (N=56)	DIFF
F181	Climb unstepped poles	76	25	51
F216	Tie knots in fiber ropes	84	39	45
F206	Perform or standard construction hand signals	79	36	43
F179	Climb stepped poles	82	39	43
F215	Tie hitches in fiber ropes	81	39	42
F180	Climb tower	90	48	42
F201	Lubricate special purpose vehicles or auxiliary equipment	59	18	41
H303	Install cable tags	68	27	41
G258	Measure strand tension using traction dynometers	59	18	41
H354	Test or troubleshoot cables using multimeters	73	32	41
H314	Load, unload, store, or transport cable reels	59	20	39
I386	Plumb antenna systems using transit method	64	25	39
F176	Backfill trenches manually	69	30	39
F196	Install lightning protection devices on poles or towers	62	23	39
F185	Dig trenches by hand	69	30	39
E128	Draft requests for TDY orders, passports, or visas	19	62	-43
A3	Assign sponsors for newly assigned personnel	17	57	-40
A30	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	21	61	-40
E122	Coordinate obtaining TDY orders, passports, or visas with appropriate agencies	27	66	-39
C88	Write recommendations for awards or decorations	29	66	-37
B46	Initiate actions required due to substandard performance of personnel	24	61	-37
C57	Analyze workload requirements	15	52	-37
A21	Participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other than conducting	49	86	-37

TRAINING ANALYSIS

Occupational survey data represent one of many sources of information used to assist in the development of training programs for career ladder personnel. Factors used to evaluate entry-level AFSC 2E6X1 training include duties performed by members across career ladder jobs, distribution of personnel across career ladder jobs, percentages of members performing specific tasks, ratings of how much TE tasks should receive in formal training, and relative TD ratings.

First-Enlistment Personnel

In this study, 70 members are in their first-enlistment (1-48 months TAFMS) representing 27 percent of the survey sample. These personnel work primarily in Maintenance Cluster jobs (see Figure 2). They spend most of their time performing general construction activities, installing and maintaining cables, performing general antenna installation and maintenance, and installing and maintaining antenna support structures (see Table 13). Table 14 shows first-enlistment personnel perform primarily technical tasks, such as climbing towers and poles and performing maintenance.

Table 15 presents a list of equipment used by more than 30 percent of first-enlistment AFSC 2E6X1 personnel. Members use a wide variety of equipment, tools, and vehicles in their jobs.

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary task factors used to help training development personnel decide what tasks need to be emphasized for entry-level training. These ratings, based on the judgments of senior career ladder NCOs at operational units, provide a rank-ordering of those tasks considered important for first-enlistment airmen training (TE), and a measure of the difficulty of those tasks (TD). When combined with the data on percentages of entry-level personnel performing tasks, comparisons can be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors (TE and TD), accompanied by moderate to high percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training of new personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist training development personnel, an Automated Training Indicator (ATI) is assigned to each task in the JI. ATIs combine percentages of first-enlistment personnel with TE and TD data to reflect a training decision based on the Training Decision Logic Table found in Attachment 1, AETCR 52-22. ATIs are numbered 1 to 18, with an 18 being the highest level of training indicated. An ATI of 7 or less corresponds to a training decision of teaching the task by OJT only. To illustrate, if a task has high TE and TD ratings and a high percentage of first-

AFSC 2E6X1 FIRST ENLISTMENT PERSONNEL CAREER LADDER JOBS

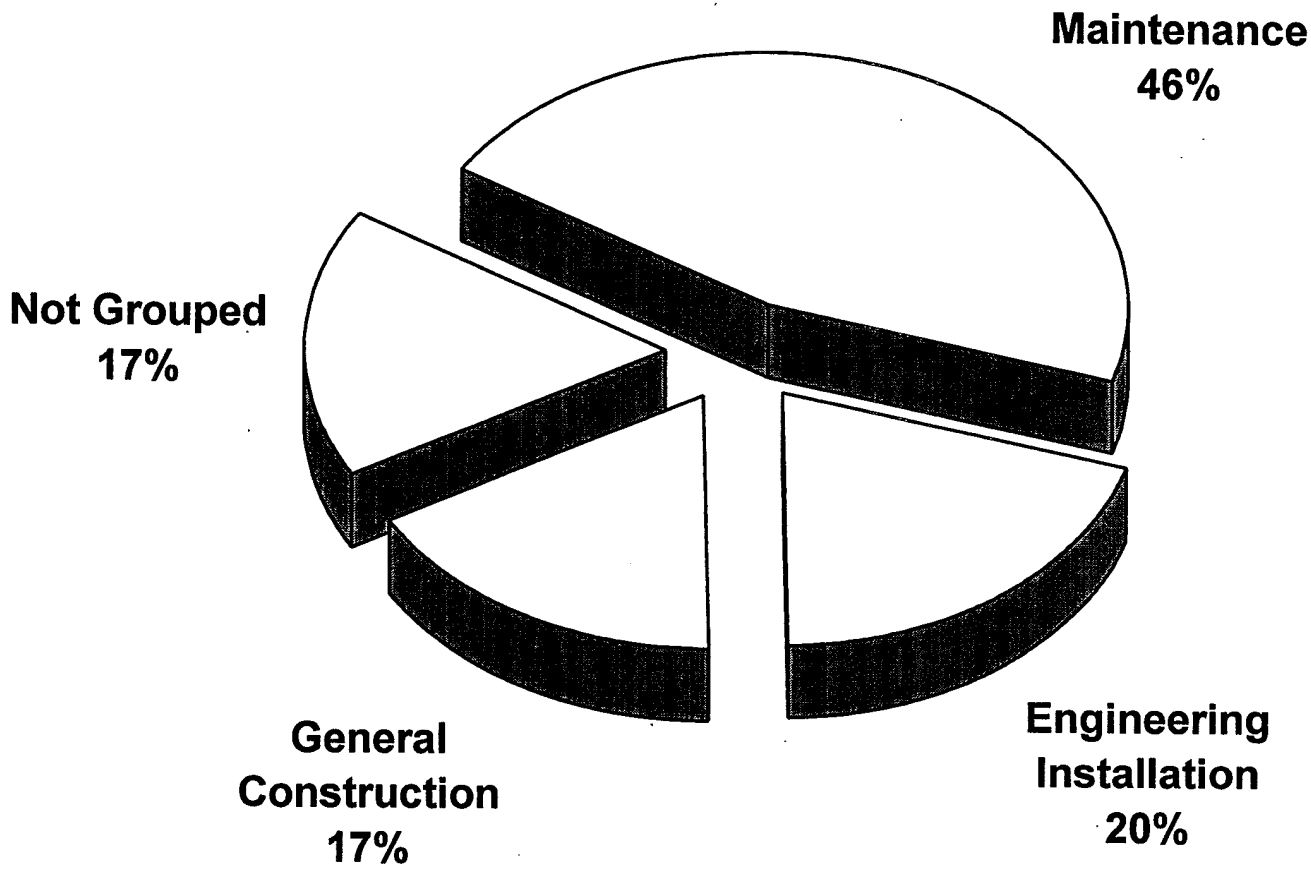

Figure 2

TABLE 13

RELATIVE PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT AFSC 2E6X1 PERSONNEL

TASKS	PERCENT TIME SPENT (N=70)
A ORGANIZING AND PLANNING	2
B DIRECTING AND IMPLEMENTING	1
C INSPECTING AND EVALUATING	2
D TRAINING	*
E PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY ACTIVITIES	5
F PERFORMING GENERAL CONSTRUCTION ACTIVITIES	27
G INSTALLING AND MAINTAINING ANTENNA SUPPORT STRUCTURES	14
H INSTALLING AND MAINTAINING CABLES	15
I PERFORMING GENERAL ANTENNA INSTALLATION AND MAINTENANCE ACTIVITIES	15
J INSTALLING AND MAINTAINING WIRE ANTENNAS	2
K INSTALLING AND MAINTAINING PARABOLIC ANTENNAS	1
L INSTALLING AND MAINTAINING RADOMES	1
M INSTALLING AND MAINTAINING WAVEGUIDES	3
N INSTALLING AND MAINTAINING ROTATABLE LOG PERIODIC (RLP) ANTENNAS	8
O PERFORMING CORE AUTOMATED MAINTENANCE SYSTEMS (CAMS) ACTIVITIES	3
P PERFORMING QUALITY ASSURANCE OR CONTROL ACTIVITIES	*
Q PERFORMING TEAM CHIEF ACTIVITIES	*
R PERFORMING MOBILITY AND SUPPORT ACTIVITIES	*

* Denotes less than 0.5 percent
** Total time spent does not add to 100 percent due to rounding

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 2E6X1
FIRST-ENLISTMENT PERSONNEL
(N=31)

TASKS		PERCENT MEMBERS PERFORMING
F180	Climb towers	96
F179	Climb stepped poles	87
F216	Tie knots in fiber ropes	87
F206	Perform or standard construction hand signals	91
F181	Climb unstepped poles	84
F215	tie hitches in fiber ropes	83
F176	Backfill trenches manually	76
G240	Inspect guys	74
F205	Perform operator maintenance on vehicles	74
G235	Inspect anchor rods	73
F204	Perform ground maintenance around antenna systems	71
F185	Dig trenches by hand	71
I380	Perform corrosion control on antenna systems	70
G236	Inspect antenna or line support structures or hardware	70
H354	Test or troubleshoot cables using multimeters	69
F192	Inspect special purpose vehicles or auxiliary equipment	66
F196	Install lightning protection devices on poles or towers	66
G249	Install pole steps	64
G258	Measure strand tension using traction dynometers	63
N462	Inspect RLP antenna systems	63
H304	Install cables with wraplock	63
H303	Install cable tags	63
F184	Dig pole holes using power equipment	63
H353	Test or troubleshoot cables using meggers	63
N461	Inspect Rotatable Log Periodic (RLP) antenna control wiring	61
F203	Measure voltage standing wave ratios	61
I382	Perform tests on antennas using multimeters	61
H314	Load, unload, store, or transport cable reels	61
I394	Remove or replace UHF antennas	60
F202	Maintain obstruction lighting systems	60
I386	Plumb antenna systems using transit method	60
F198	Interpret schematic diagrams	60

Average Number of Tasks Performed -109

TABLE 15

EQUIPMENT ITEMS USED BY MORE THAN 20 PERCENT OF FIRST-JOB OR FIRST-ENLISTMENT AFSC 2E6X1 PERSONNEL

EQUIPMENT	1ST JOB (N=31)	1ST ENL (N=70)
Climbing Equipment	97	94
Shovel	97	93
Wire Brush	94	97
Lineman's Belt with Safety Strap	94	96
Tape Measure	94	96
Host, Chain	90	94
Snatch Block	90	93
Drill, Electric	87	94
Hammer, Sledge	87	94
Multimeter	87	91
Wrench, Pipe	87	89
Hack Saw	84	91
Cutter, Bolt	84	90
Gaff Gauge	84	89
Bar, Digging	84	79
Transit	81	86
Wrench, Spud	81	80
Hoist, Coffing	81	74
Pick	77	79
Truck, Six-Pax	77	77
Grip, Cable	77	73
Tripod	74	83
Hoist, Wire	74	80
Handline and Bucket	74	76
Wrench, Torque	74	73
Cutter, Wire/Rope	71	79
Tamper	71	70
Walking or Measurement Wheel, such as Cyclometer	68	77
Sheaves and Shackle	68	67
Ohmmeter	68	67
Soldering Gun	65	77
Block and Tackle	65	70
Cable Cutter	65	60
Wrench, Impact	65	57
Tool, Crimping	61	71
Cable Jack	61	64
Axe	61	54
Vehicle, Low-Profile	58	73
Kit, Stencil	58	71
Grip, Strand	58	64

TABLE 15 (CONTINUED)

EQUIPMENT ITEMS USED BY MORE THAN 20 PERCENT OF FIRST-JOB OR FIRST-ENLISTMENT AFSC 2E6X1 PERSONNEL

EQUIPMENT	1ST JOB (N=31)	1ST ENL (N=70)
Cutter, Tube	55	66
Kit, Safety	55	59
Hook, Manhole Cover	55	51
Voltmeter	55	49
Wire Lashing Clamp	55	46
Forklift, up to 20,000 pounds	55	44
Rod, Duct	55	44
Locator, Buried Cable and Fault	52	54
Truck, Gasoline	52	51
Wattmeter, Thru-Line	48	63
Manhole Pump	48	53
Cable Lasher	48	41
Air Powered Handtools	48	33
Spectrum Analyzer	45	53
Saw, Chain	45	51
Device, Traffic Warning	45	50
Saw, Electric	45	43
Manhole Rail Guard	45	34
Anchor Expander	45	30
Test Set, Insulation, such as Megger, PSM-2	42	64
Kit, File	42	63
Weed Eater	42	59
Portable Gas Generator	42	57
Dynamometers, Deflection-Type Strand	42	49
Brazing and Soldering Torch	42	40
Backhoe	42	39
Oscilloscope	42	39
Truck, V-11 Line	39	43
Swivel Shackle	39	39
Maddox	39	37
Lawn Mower	35	46
Blower, Portable Ventilation	35	33
Pole Pike	35	30
Dynamometers, Traction-Type Strand	32	43
Truck, Diesel	32	39
Hook, Cant	32	39
Trailer, Hydraulic Cable Reel	32	33
Cable Guide, Aerial	32	31
Cable Guide, Pulling	32	31
Double-Eye Swivel	32	31

enlistment personnel performing, an ATI above 16 is assigned to the task. With an ATI rating above 16, strong recommendations can be made to emphasize training the task in a resident training course to both the knowledge and performance levels.

Tasks with the highest TE ratings are listing in Table 16. Included for each task are the percentage of first-job and first-enlistment personnel performing the task and the TD rating. As illustrated by the tasks listed, most apply to climbing, testing, and general construction.

Table 17 lists the tasks with the highest TD ratings. The percentages of first-job, first-enlistment, 5-, and 7-skill level personnel performing the tasks, and the TE ratings are included for each task. Most of the tasks with high TD values are supervisory or managerial (Duties A-E) in nature or deal with installing and maintaining antenna support structures (Duty G).

Various lists of tasks, accompanied by TE and TD ratings, are contained in the TRAINING EXTRACT package and should be reviewed in detail by technical school personnel. For a more detailed explanation of TD and TE ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.

Course Training Standard (CTS) Analysis

A comprehensive review of the AFSC 2E6X1 CTS was made by comparing survey data to CTS elements. To assist specifically in the examination of the CTS, technical school personnel from Sheppard AFB matched JI tasks to appropriate sections and subsections of the CTS. A complete listing, displaying percent members performing tasks, TE and TD ratings for each task, along with CTS matching has been forwarded to the technical school for use in further review of training documents. Using the guidance provided in AFI 36-2623 and AETCR 52-22, CTS elements were reviewed in terms of TE, TD, and percent members performing information. Typically, tasks performed by 30 percent or more personnel in appropriate experience or skill-level groups, such as first-enlistment (1-48 months TAFMS), and 5- and 7-skill level groups, should be considered for inclusion in the CTS. Likewise, tasks with less than 30 percent performing in all of these groups should be considered for deletion from the CTS.

A review of the CTS showed 28 percent of the CTS items were unsupported by survey data. The unsupported items, along with accompanying JI tasks and survey data, are listed in Table 18. Several of the unsupported tasks pertain to Duty H, installing and maintaining cables. Training personnel and SMEs should review these unsupported CTS items to determine if inclusion in future revisions is warranted.

Tasks performed by 30 percent or more of criterion groups, but not matched by the technical school personnel to any CTS paragraphs are listed in Table 19. Training personnel and SMEs should review these and other unreferenced tasks to determine their appropriateness in being included in the CTS.

TABLE 16

SAMPLE OF TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		PERCENT MEMBERS PERFORMING			
		TNG EMP	1ST JOB	1ST ENL	TASK DIFF
F181	Climb unstepped poles	6.91	87	84	5.74
H356	Test or troubleshoot cables using time domain reflectometers (TDRs)	6.75	42	57	6.42
H352	Test manholes for combustible or toxic gases or oxygen deficiency	6.53	42	44	4.88
F180	Climb towers	6.53	94	96	3.83
F215	Tie hitches in fiber ropes	6.34	71	83	2.96
F186	Dig trenches using power equipment, such as backhoes or trenchers	6.34	55	53	4.99
G226	Erect poles using line truck method	6.28	42	40	5.66
F216	Tie knots in fiber ropes	6.25	81	87	3.14
N468	Raise or lower RLP antennas using electric winches	6.25	42	57	6.90
H354	Test or troubleshoot cables using multimeters	6.06	48	69	4.48
F179	Climb stepped poles	6.03	81	87	3.51
N474	Rig RLP antennas for raising or lowering	6.03	42	54	6.78
F184	Dig pole holes using power equipment	6.00	55	63	4.79
H353	Test or troubleshoot cables using meggers	5.91	48	63	4.45
I381	Perform return loss measurements on antenna cables	5.91	29	57	5.88
I386	Plumb antenna systems using transit method	5.91	45	60	5.21
F203	Measure voltage standing wave ratios	5.84	42	61	6.01
G221	Erect guyed antenna support towers using line truck method	5.84	29	17	6.27
I371	Install VHF antennas	5.84	42	53	4.92
N464	Install RLP antennas	5.84	23	20	7.13

* Mean TE Rating is 2.68 and Standard Deviation is 1.63; High TE is 4.31.

** Average TD Rating is 5.00

TABLE 17

TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		PERCENT MEMBERS PERFORMING					
		TD	1ST JOB	1ST ENL	2E651	2E671	TE
A15	Draft budget requirements	7.79	0	0	11	43	0.53
D100	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	7.51	0	0	6	9	0.06
I383	Perform tests on antennas using spectrum analyzers	7.50	19	33	36	9	5.06
A9	Develop cost-reduction programs	7.42	0	3	11	36	0.62
D99	Develop career development course (CDC) materials	7.39	0	1	4	4	0.28
A16	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	7.34	0	0	12	39	1.19
G227	Erect self-supporting antenna support towers using basketboom method	7.32	19	11	8	0	3.00
H355	Test or troubleshoot cables using spectrum analyzers	7.30	32	37	34	7	5.12
C90	Write staff studies, surveys, or special reports, other than training reports	7.26	0	1	8	29	0.44
A12	Develop quality assurance programs	7.20	0	1	13	39	1.34
N473	Remove or replace RLP antennas	7.16	16	20	21	7	4.38
N464	Install RLP antennas	7.13	23	20	21	7	5.84
G220	Erect guyed antenna support towers using floating gin-pole method	7.07	32	23	19	5	5.25
G230	Erect self-supporting antenna support towers using gloating gin-pole method	7.06	23	14	14	2	4.75
D101	Develop new equipment training programs	7.05	0	3	11	9	0.06
C86	Write civilian performance appraisals	7.01	0	0	2	7	0.62
G261	Perform extended heights rescues	7.01	23	14	12	4	5.81
C64	Evaluate budget requirements	6.98	19	36	7	32	0.44
N469	Raise or lower RLP antennas using hand winches	6.98	10	9	32	9	4.22
G255	Install underground service using directional boring machine	6.98	10	7	11	2	2.97

TABLE 18

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS		TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
3.13	Install and remove a self-supporting GP-1 tower using a floating gin pole							
	G286 Remove self-supporting antenna support towers using floating gin-pole method	4.38	11	23	14	12	2	6.42
3.14	Know the procedures to install and remove a self-supporting GP-1 tower using a construction vehicle							
	G228 Erect self-supporting antenna support towers using crane method	4.78	11	29	20	23	4	6.17
	G230 Erect self-supporting antenna support towers using floating gin-pole method	4.75	11	23	14	14	2	7.06
3.15	Know the procedures to assemble and disassemble an AS-3482 rotatable antenna							
	N473 Remove or replace RLP antennas	4.38	11	16	20	21	7	7.16
3.16	Rig an AS-3482 rotatable antenna for lowering and raising							
	N464 Install RLP antennas	5.84	11	23	20	21	7	7.13
3.19	Install and remove an AB-216 guyed antenna support using a floating gin pole							
	G267 Remove guyed antenna support towers using floating gin-pole method	4.25	7	19	13	13	4	6.61
3.23	Know the procedures to install patent and non-patent anchors							
	G273 Remove or replace nonpatent anchors	2.91	7	16	13	12	4	5.17
	G274 Remove or replace patent anchors	3.66	7	23	16	15	4	4.90

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 18 (CONTINUED)

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS		TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
3.26	Know obstruction markings requirements when installing an AB-216 tower							
	F182 Determine specifications for ground obstruction markings	3.72	7	16	19	24	13	5.07
3.27	Know the steps to install safety climb devices							
	G250 Install safety-climb devices	4.44	9	23	24	24	9	3.96
3.28	Site anchor locations using a transit							
	F213 Site anchor locations	3.97	7	29	23	24	13	6.19
4.8	Remove and install an 8 ft. reflector on a D-102 tower using a construction vehicle							
	K414 Install preassembled parabolic antennas	4.12	7	10	10	10	9	5.45
4.10	Remove and install antenna support hardware on an 8 ft. reflector							
	I367 Install feedhorns	4.53	11	29	29	27	9	5.17
	I391 Remove or replace feedhorns	3.47	7	23	21	27	11	5.18
	K411 Install parabolic antenna mounts	3.78	7	16	13	14	13	5.13
	K419 Remove or replace parabolic antenna mounts	2.78	7	16	13	11	7	5.01
4.12	Know the procedure to install ground reflecting systems							
	J406 Remove or replace ground reflector systems	3.03	7	16	19	19	13	5.26
4.15	Know the procedures to install and remove flexible coaxial cable							
	H313 Lash aerial cables	4.47	11	29	21	20	9	5.39

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 18 (CONTINUED)

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS		TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
4.16	Know the procedures to install and remove rigid coaxial cable							
H296	Install aerial rigid coaxial cables	4.19	7	26	17	18	4	4.86
H335	Remove or replace aerial rigid coaxial cables	3.25	7	26	19	20	5	4.91
4.17	Install an aerial run of semiflexible coaxial cable							
H313	Lash aerial cables	4.47	11	29	21	20	9	5.39
H336	Remove or replace aerial semiflexible coaxial cables	3.41	7	19	20	27	16	4.86
4.19	Install a connector on a flexible coaxial cable							
H338	Remove or replace buried coaxial cable connectors	3.16	7	16	24	21	9	4.23
4.20	Install a connector on a semiflexible coaxial cable							
H310	Install underground coaxial cable connectors	4.59	11	26	23	20	14	4.24
H311	Install underground flexible coaxial cables	4.38	11	26	26	24	11	4.02
H312	Install underground semiflexible coaxial cables	4.19	3	26	24	21	11	3.89
H338	Remove or replace buried coaxial cable connectors	3.16	7	16	24	21	9	4.23
4.22	Know the procedures to form coaxial cable							
H290	Form and arrange cables for splicing	3.00	7	23	29	20	7	4.42
4.23	Know the procedure to rack coaxial cable							
G277	Remove or replace underground cable racks	2.31	1	16	13	13	0	3.90

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 18 (CONTINUED)

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS		TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
4.25	Install and remove flexible waveguide							
	M439 Install flexible waveguides	5.53	11	23	21	27	13	5.53
	M442 Install waveguide grounding systems	4.22	7	23	20	22	11	4.60
	M444 Install waveguide supports or mounts	4.28	7	23	19	21	11	4.46
	M456 Remove or replace flexible waveguides	3.78	7	19	19	24	13	5.09
4.26	Install and remove rigid waveguide							
	M440 Install rigid waveguides	4.81	11	26	20	18	9	5.38
	M444 Install waveguide supports or mounts	4.28	7	23	19	21	11	4.46
	M457 Remove or replace rigid waveguides	3.41	7	23	19	20	7	5.17
4.27	Install cable air dryer							
	H305 Install dehydrators	3.44	7	13	13	13	7	5.18
	H341 Remove or replace dehydrators	2.72	7	13	19	18	9	4.55
4.28	Know the procedures to pressurize antenna transmission lines							
	H330 Pressurize cables using nitrogen bottles	4.19	7	10	24	28	14	4.15
	M443 Install waveguide pressurization systems	4.41	11	13	11	16	9	5.57
	M446 Locate waveguide pressure leaks	4.41	11	10	19	21	18	4.66
	M458 Seal waveguide pressure leaks	3.88	7	13	16	20	14	4.97
4.29	Install a connector on a flexible waveguide							
	M441 Install waveguide connectors	5.53	11	26	20	25	14	5.51

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 18 (CONTINUED)

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS		TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
5.1	Perform scheduled preventive maintenance inspection on a transmission line							
	H317 Maintain aerial rigid coaxial cables	3.16	7	13	16	15	4	4.28
	H318 Maintain aerial semiflexible coaxial cables	3.50	7	16	26	23	20	4.45
	H322 Maintain underground flexible coaxial cables	3.44	7	23	24	12	11	4.05
	H323 Maintain underground semiflexible coaxial cables	3.34	3	13	19	14	13	3.97
	M449 Maintain rigid waveguides	3.19	7	13	19	17	13	4.27
	M450 Maintain waveguide connectors	3.53	7	13	26	25	14	4.21
	M451 Maintain waveguide pressurization systems	3.94	7	10	20	22	13	4.75
	M453 Perform corrosion control on waveguides	3.81	7	13	26	26	13	4.07
5.6	Perform scheduled preventive maintenance inspection on a cable air dryer							
	H321 Maintain dehydrators	3.75	7	13	24	27	20	4.98
	H357 Troubleshoot dehydrators	3.50	7	6	20	23	13	6.04
7.16	Climb an unstepped pole to a height of 21 ft using proper techniques							
	G261 Perform extended heights rescues	5.81	11	23	14	12	4	7.01
8.2	Know the procedures to manually install coaxial cables							
	H346 Remove or replace underground flexible coaxial cables	3.50	7	13	17	14	14	4.33
	H347 Remove or replace underground semiflexible coaxial cables	3.28	7	16	17	15	14	4.33
8.7	Know the procedures to install buried coaxial cable							
	H346 Remove or replace underground flexible coaxial cables	3.50	7	13	17	14	14	4.33
	H347 Remove or replace underground semiflexible coaxial cables	3.28	7	16	17	15	14	4.33

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 18 (CONTINUED)

CTS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 30 PERCENT MEMBERS PERFORMING)

CTS ITEMS/TASKS	TE	ATI	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TD
8.11 Know the procedures to install cable route markers							
H337 Remove or replace buried cable markers	2.59	1	16	21	19	13	2.95

* Mean TE Rating is 2.68, Standard Deviation is 1.63, and High TE is 4.31
** Average TD Rating is 5.00

TABLE 19

TECHNICAL TASKS PERFORMED BY 30 PERCENT OR MORE
GROUP MEMBERS AND NOT REFERENCED TO THE CTS

TASKS		TNG EMP	1ST JOB N=31	1ST ENL N=70	2E651 N=135	2E671 N=56	TSK DIFF
F177	Backfill trenches mechanically	5.72	39	44	55	21	4.75
F178	Clean ducts	4.72	35	31	32	16	3.70
F186	Dig trenches using power equipment, such as backhoes or trenchers	6.34	55	53	58	21	4.99
F188	Establish datum lines	4.50	32	24	21	4	5.95
F190	Inspect cable or pole trailers	4.34	35	36	37	18	3.65
F192	Inspect special purpose vehicles or auxiliary equipment	5.00	58	66	70	34	4.15
F195	Install lightning protection devices on antenna transmission systems	4.56	71	66	51	23	4.16
F201	Lubricate special purpose vehicles or auxiliary equipment	4.41	39	50	59	18	3.05
F203	Measure voltage standing wave ratios	5.84	43	61	56	27	6.01
F205	Perform operator maintenance on vehicles	5.34	68	74	82	46	2.82
G218	Erect guyed antenna support towers using crane method	4.91	26	21	33	9	5.73
G223	Erect poles using crane method	4.34	39	31	58	4	4.93
G248	Install patent anchors	4.22	35	26	30	7	3.97
G249	Install pole steps	4.91	58	64	53	16	3.48
G253	Install suspension strands	4.75	35	36	35	18	5.19
G258	Measure strand tension using traction dynamometers	5.06	52	63	59	18	4.44
G270	Remove or replace antenna support crossarms	4.62	29	37	38	14	4.41
G289	Tension suspension strands	4.78	42	44	48	14	4.81
H326	Perform plastic sheath repairs on coaxial cables	5.00	19	27	46	21	4.28
H332	Pull in underground cables using sheaves or sheaf shackles	4.38	23	24	30	11	4.91
H333	Pull in underground cables using vehicles	4.25	26	30	29	11	4.97
H352	Test manholes for combustible or toxic gases or oxygen deficiency	6.53	42	44	36	18	4.88
H355	Test or troubleshoot cables using spectrum analyzers	5.12	32	37	34	7	7.30
H358	Ventilate manholes	5.41	32	36	32	9	3.79

JOB SATISFACTION ANALYSIS

An examination of responses to the job satisfaction questions can give career ladder managers a better understanding of some of the factors affecting the job performance of airmen in the career ladder. Job satisfaction data can be expanded to provide indications of general attitudes within specific DAFSC groups.

The job satisfaction responses of the current survey sample were analyzed through the following comparisons: (1) among TAFMS groups of the AFSC 2E6X1 career ladder and a comparative sample of other logistics career ladders surveyed the previous year, (2) between current and previous AFSC 2E6X1 personnel, and (3) across specialty groups identified in the **SPECIALTY JOBS** section of this report.

Table 20 shows the comparison of TAFMS group data of AFSC 2E6X1 respondents to a comparative sample of other logistics career ladders surveyed the previous year. These data provide a relative measure of how AFSC 2E6X1 personnel job satisfaction responses compare with similar Air Force specialties. Communications Antenna Systems personnel are more satisfied with their jobs than members of a comparative sample of logistics personnel.

An indication of changes in job satisfaction perceptions within the career ladder over time is provided in Table 21, comparing TAFMS group data for current survey respondents to data of previous survey respondents. The current AFSC 2E6X1 respondents seem about as satisfied with their jobs as those respondents surveyed in 1990. The current survey 49-96 months TAFMS group members exhibit a greater interest to reenlist than 49-96 months TAFMS group members in 1990.

Finally, job satisfaction data for identified jobs are provided in Table 22. Generally, job satisfaction data are high for personnel across most identified jobs. Only the General Construction Job members express a slightly lower interest in their jobs and feel less sense of accomplishment from their work than their counterparts. All jobs feel their training and talents are utilized adequately.

Summary

Overall, AFSC 2E6X1 members appear to be more satisfied with their jobs than members of a comparative sample of logistics career ladder personnel. Furthermore, members of the current sample appear as satisfied with their jobs as previous AFSC 2E6X1 (formerly AFSC 361X0) personnel surveyed in 1989. Job satisfaction data of specific career ladder jobs show most job members find their work to be interesting and feel their talents and training are being properly used.

TABLE 20

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS AND COMPARATIVE SAMPLE
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	AFSC 2E6X1 (N=70)	COMP SAMPLE (N=3099)	AFSC 2E6X1 (N=39)	COMP SAMPLE (N=2781)	AFSC 2E6X1 (N=146)	COMP SAMPLE (N=5702)
EXPRESSED JOB INTEREST:						
INTERESTING	76	63	77	61	74	69
SO-SO	17	23	13	26	17	22
DULL	7	13	10	13	9	9
PERCEIVED UTILIZATION OF TALENTS:						
FAIRLY WELL TO PERFECTLY	86	68	90	71	82	79
LITTLE OR NOT AT ALL	14	32	10	29	18	21
PERCEIVED UTILIZATION OF TRAINING:						
FAIRLY WELL TO PERFECTLY	93	87	87	84	85	80
LITTLE OR NOT AT ALL	7	11	13	14	15	18
NO RESPONSE	0	2	0	2	0	2
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:						
SATISFIED	94	68	79	68	72	73
NEUTRAL	9	17	11	12	12	12
DISSATISFIED	7	15	10	19	16	15
REENLISTMENT INTENTIONS:						
YES, OR PROBABLY YES	59	66	90	81	74	76
NO, OR PROBABLY NO	41	34	10	19	8	6
PLAN TO RETIRE	0	0	0	0	18	18

* Comparative data are from AFSCs 2A5X2, 2A6X4, 2A7X2, 2A7X4, 2E3X1, 2F0X1, and 2W1X1 surveyed in 1994.

TABLE 21

COMPARISON OF JOB SATISFACTION INDICATORS FOR AFSC 2E6X1
TAFMS GROUPS IN CURRENT STUDY AND PREVIOUS STUDY
(PERCENT MEMBERS RESPONDING POSITIVELY)

	1-48 MONTHS		49-96 MONTHS		97+ MONTHS	
	1995 (N=70)	1990 (N=220)	1995 (N=39)	1990 (N=85)	1995 (N=146)	1990 (N=155)
EXPRESSED JOB INTEREST:						
INTERESTING	76	80	77	81	74	82
SO-SO	17	15	13	6	17	8
DULL	7	4	10	13	9	8
PERCEIVED UTILIZATION OF TALENTS:						
FAIRLY WELL TO PERFECTLY	85	90	90	84	82	85
LITTLE OR NOT AT ALL	15	10	10	16	18	15
PERCEIVED UTILIZATION OF TRAINING:						
FAIRLY WELL TO PERFECTLY	93	94	87	86	85	85
LITTLE OR NOT AT ALL	7	6	13	14	15	15
NO RESPONSE						
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:						
SATISFIED	84	85	79	80	72	81
NEUTRAL	9	11	11	5	12	4
DISSATISFIED	7	4	10	12	16	14
NO RESPONSE	0	0	0	4	0	1
REENLISTMENT INTENTIONS:						
YES, OR PROBABLY YES	59	56	90	66	74	72
NO, OR PROBABLY NO	41	42	10	32	8	6
PLAN TO RETIRE	0	0	0	1	18	19
NO RESPONSE	0	2	0	1	0	3

TABLE 22

COMPARISONS OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	GENERAL CONSTRUCTION (N=13)	ENGINEERING/ ELECTRONICS INSTALLATION (EI) CLUSTER (N=51)	ANTENNA MAINTENANCE CLUSTER (N=114)	QUALITY ASSURANCE (N=6)	SUPERVISION (N=18)
EXPRESSED JOB INTEREST:					
INTERESTING	62	84	73	100	94
SO-SO	15	14	18	0	0
DULL	23	2	9	0	6
PERCEIVED UTILIZATION OF TALENTS:					
FAIRLY WELL TO PERFECTLY	77	94	87	100	83
LITTLE OR NOT AT ALL	23	6	13	0	17
PERCEIVED UTILIZATION OF TRAINING:					
FAIRLY WELL TO PERFECTLY	77	94	94	100	78
LITTLE OR NOT AT ALL	23	6	6	0	22
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:					
SATISFIED	46	92	81	67	67
NEUTRAL	31	6	8	17	11
DISSATISFIED	23	2	11	17	22
REENLISTMENT INTENTIONS:					
YES, OR PROBABLY YES	46	78	77	67	67
NO, OR PROBABLY NO	54	14	17	33	0
WILL RETIRE	0	8	6	0	33

IMPLICATIONS

This survey was conducted primarily to provide training personnel with current information on the Communications Antenna Systems specialty for use in reviewing current training programs and training documents. Although the career field is shrinking, results indicate little change in the jobs since the last survey in 1990. The present classification structure, as described in *AFMAN 36-2108 Specialty Descriptions*, accurately portrays the jobs in this study. Analysis of career ladder documents indicates the CTS is primarily supported by survey data; however, training personnel and SMEs should review unsupported and unreferenced CTS items.

The findings of this OSR come directly from survey data collected from AFSC 2E6X1 personnel worldwide. These data are readily available to training and utilization personnel, functional managers, and other interested parties. Much of the data are compiled into extracts which are excellent tools in the decision-making process. These data extracts should be used when training or utilization decisions are made.

APPENDIX A

REPRESENTATIVE TASKS PERFORMED BY MEMBERS OF CAREER LADDER JOBS

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TABLE A1

GENERAL CONSTRUCTION

	REPRESENTATIVE TASKS	PERCENT MEMBERS PERFORMING
F185	Dig trenches by hand	100
F180	Climb towers	100
F181	Climb unstepped poles	92
F176	Backfill trenches manually	92
F206	Perform or standard construction hand signals	92
F216	Tie knots in fiber ropes	85
F200	Load or unload dry storage materials	85
F179	Climb stepped poles	77
F196	Install lightning protection devices on poles or towers	77
F195	Install lightning protection devices on antenna transmission systems	77
F215	Tie hitches in fiber ropes	77
F192	Inspect special purpose vehicles or auxiliary equipment	69
F184	Dig pole holes using power equipment	62
G249	Install pole steps	62
F205	Perform operator maintenance on vehicles	54
A21	Participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other than conducting	54
E137	Inventory equipment, tools, or supplies	54
F186	Dig trenches using power equipment, such as backhoes or trenchers	54
G233	Fabricate guys	54
F189	Fabricate rolled-eye splices	46
F210	Remove or replace lightning protection devices on poles or towers	46
F183	Dig pole holes by hand	46
I370	Install UHF antennas	46
F178	Clean ducts	39
H353	Test or troubleshoot cables using meggers	39
G223	Erect poles using crane method	39
F212	Rod ducts	31
E168	Store equipment, tools, or supplies	23
C61	Conduct self-inspections	23

TABLE A2

ENGINEERING INSTALLATION CLUSTER

REPRESENTATIVE TASKS		PERCENT MEMBERS PERFORMING
F180	Climb towers	98
F206	Perform or standard construction had signals	96
F185	Dig trenches by hand	96
F179	Climb stepped poles	94
F205	Perform operator maintenance on vehicles	94
F176	Backfill trenches manually	94
G249	Install pole steps	92
F177	Backfill trenches mechanically	90
F181	Climb unstepped poles	90
F196	Install lightning protection devices on poles or towers	90
F184	Dig pole holes using power equipment	90
I370	Install UHF antennas	90
I371	Install VHF antennas	90
F216	Tie knots in fiber ropes	88
F186	Dig trenches using power equipment, such as backhoes or trenchers	88
F215	tie hitches in fiber ropes	88
F195	Install lightning protection devices on antenna transmission systems	88
F191	Inspect pintle hooks	88
F197	Install obstruction lighting systems	86
G254	Install tower grounding systems	86
H314	Load, unload, store, or transport cable reels	86
F189	Fabricate rolled-eye splices	86
F192	Inspect special purpose vehicles or auxiliary equipment	84
F200	Load or unload dry storage materials	84
H303	Install cable tags	84
F201	Lubricate special purpose vehicles or auxiliary equipment	82
I396	Rig antenna systems for installation	82
G218	Erect guyed antenna support towers using crane method	82

TABLE A3

ANTENNA MAINTENANCE CLUSTER

REPRESENTATIVE TASKS		PERCENT MEMBERS PERFORMING
F180	Climb towers	99
I380	Perform corrosion control on antenna systems	98
G240	Inspect guys	95
I377	Maintain UHF antennas	94
G236	Inspect antenna or line support structures or hardware	94
F216	Tie knots in fiber ropes	94
I378	Maintain VHF antennas	93
F179	Climb stepped poles	93
F215	Tie hitches in fiber ropes	93
G235	Inspect anchor rods	91
F205	Perform operator maintenance on vehicles	90
F206	Perform or standard construction hand signals	90
I375	Maintain HF antennas	89
I382	Perform tests on antennas using multimeters	89
H354	Test or troubleshoot cables using multimeters	88
I360	Identify or tag antennas	86
F204	Perform ground maintenance around antenna systems	84
N462	Inspect RLP antenna systems	83
H292	Inspect cable tags	82
N466	Maintain RLP antennas	81
N461	Inspect Rotatable Log Periodic (RLP) antenna control wiring	81
G237	Inspect cement bases	81
F181	Climb unstepped poles	80
I381	Perform return loss measurements on antenna cables	79
H353	Test or troubleshoot cables using meggers	79
N465	Maintain RLP antenna electrical components	78
H303	Install cable tags	78
N477	Test or troubleshoot RLP antenna control wiring using multimeters	77
F203	Measure voltage standing wave ratios	77

TABLE A4

QUALITY CONTROL

	REPRESENTATIVE TASKS	PERCENT MEMBERS PERFORMING
D104	Evaluate effectiveness of training programs	100
C62	Conduct staff assistance visits (SAVs)	100
C76	Evaluate safety or security programs	100
A12	Develop quality assurance programs	100
D109	Evaluate training methods and techniques	100
E131	Identify and report equipment or supply problems	100
E128	Draft requests for TDY orders, passports, or visas	100
E164	Review publishing bulletins	83
A14	Develop self-inspection program checklists	83
C90	Write staff studies, surveys, or special reports, other than training reports	83
A21	Participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other than conducting	83
C65	Evaluate causes of mission operational discrepancies	83
A27	Review drafts of regulations, manuals, or other directives	83
C69	Evaluate job hazards or compliance with Air Force Occupational Safety and Health (AFOSH) Program standards	83
C57	Analyze workload requirements	83
E119	Compile information for records, reports, or logs	83
P521	Review communications and computer facility records (CCFRs)	83
C68	Evaluate inspection report findings	83
C72	Evaluate maintenance of equipment, tools, supplies, or workspace	83
P522	Review systems or equipment failure data	83
C83	Inspect personnel for compliance with military standards	83
C61	Conduct self-inspections	83
E126	Draft or write after-action reports	83
A7	Determine or establish publication requirements	83
E122	Coordinate obtaining TDY orders, passports, or visas with appropriate agencies	83
P517	Perform activity inspections	67

TABLE A5

SUPERVISION

REPRESENTATIVE TASKS		PERCENT MEMBERS PERFORMING
A30	Schedule personnel for temporary duty (TDY) assignments, leaves, or passes	100
A24	Plan or schedule work assignments or priorities	100
A8	Determine or establish work priorities	100
B35	Counsel personnel on personal or military-related matters	100
A17	Establish performance standards for subordinates	100
C87	Write EPRs	100
A21	Participate in general meetings, such as staff meetings, briefings, conferences, and workshops, other than conducting	94
C83	Inspect personnel for compliance with military standards	94
A19	Establish work schedules	94
C88	Write recommendations for awards or decorations	94
A1	Assign personnel to duty positions	94
A3	Assign sponsors for newly assigned personnel	94
B34	Conduct supervisory orientations of newly assigned personnel	94
A2	Assign projects, maintenance, and repair work	89
A6	Determine or establish logistics requirements, such as personnel, equipment, space, tools, or supplies	89
E122	Coordinate obtaining TDY orders, passports, or visas with appropriate agencies	89
E128	Draft requests for TDY orders, passports, or visas	89
C59	Conduct performance feedback worksheet (PFW) evaluation sessions	89
B46	Initiate actions required due to substandard performance of personnel	89
B55	Supervise Communication-Cable and Antenna systems Craftsmen (AFSC 2E671)	83
A18	Establish work methods or procedures	83
E151	Maintain workcenter pyramid recall plans	83
B54	Supervise Communication-Cable and Antenna Systems Journeymen (AFSC 2E651)	78
E133	Initiate electronic mail (E-mail)	78
C81	Indorse enlisted performance reports (EPRs)	78
C74	Evaluate personnel for promotion, demotion, reclassification, or special awards	78